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Improvised rental housing to make cities COVID safe in India

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Over the ages, epidemics have been thoroughly studied in epidemiology and health geography (Buchillet, 2007), especially cholera and plagues in New York (1832), London (1846–60), Paris (1850s) & Mumbai (1893–96) (Science Museum, 2018). The last three epidemics Ebola (2013–16), MERS (2012) and SARS (2002–04) were restricted in their geographical spread and except for few nations; the world at large had a limited learning from those (Peeri et al., 2020). The wild-spread of the novel Coronavirus has forced the global community to seriously reconsider how people live, work and travel in contemporary societies. The COVID-19 has largely proved to be an urban catastrophe of gigantic proportions (BBC, 2020). What first appeared as a pneumonic flu in Wuhan's wet market (WHO, 2020a) got rapidly transmitted through airways, infecting major global trade, business and civic capitals including New York, Moscow, Barcelona, Sao Paulo, Los Angeles, London, Singapore, Milan, Paris and Mumbai. During the first 100 days of WHO's announcement of the pandemic, the top 10 affected cities constituted 646,113 or about 15% global COVID reported cases. While the global COVID knowledge (CDC, 2020; WHO, 2020b) reasons several individual indicators like age and co-morbidities influence COVID risk, there is increasing evidence suggesting crowding high *city population* and *urban density* abets respiratory transmission rates in cities, be it for influenza (Dalziel et al., 2018) or COVID-19 (Stier et al., 2020) that we would like to explore. In this commentary we take a methodical assessment of how COVID-19 experience necessitates a relook at existing living conditions in the developing countries. We consider the case of Indian cities (Mumbai 33,112/sq.km, Chennai 24,545 /sq. km) that are home to some of the most crowded populations on the planet, even bypassing their Western counterparts like New York (24,010/sq. km), Boston (18,569/sq. km) and Milan (17,228/sq. km). Upon plotting urban density and COVID-19 incidence rates in top-14 Indian cities, we find a strong correlation corroborating that intensely packed communities have been the most affected (Fig. 1).

Cramped places can exist anywhere in the world- in high income cities like New York (Brooklyn) and London (Newham & Mitcham) but most commonly found in low-income cities like Rio (Rocinha and Chapeu Mangueira favelas) (Ro, 2020, Spleen, 2020) and Mumbai's Dharavi slum (Priolker, 2020). But beyond urban density, there is definitely more than meets the eye. Growing literature now indicates that residential living conditions- socio-economics, neighbourhood circumstances and household crowding (Chen et al., 2020; Mays & Newman, 2020; Wall, 2020) significantly control the pandemic. The ground evidence from India supports this theory. With 3935 persons or about 800 dwelling units (DU) per hectare, Dharavi is one of the most crowded slums in the entire world, with 80% living in rental accommodation (Lewis, 2011). Here, a 10 × 10 feet room is shared by 10–12 residents who normally work and sleep in shifts, akin to the factory workers during the European industrialization.

The migrant labour forms the backbone of an informal economy, living under perpetual physical, social & economic distress in these slums which offer scarce infrastructure for a decent living. Cities with slums, unauthorized & squatter settlements are least prepared to prevent and endure pandemic since basic needs such as water, toilets, sewers, drainage, waste collection, and secure and adequate housing are already in short supply or non-existent (Corburn et al., 2020; Wasdani & Prasad, 2020). The lack of formal contracts and adherence to tenancy laws makes several tenants prone to exploitative owners, abyssal lease security and unpredictable rent escalations. It is the same migrants who took to the roads, fleeing cluttered and insanitary huts to reach their villages, walking for thousands of miles risking their lives (Venkatraman et al., 2020).

As India ambitiously aims to become a 21st century economic powerhouse, it has to ensure its swarming migrant population has access to social housing, which is environmentally safe, socially fulfilling, economically affordable and legally secure, especially at times of natural and public-health disasters. Unfortunately, India does not have a clear track record in rental housing. Strict rent controls after the World War II saw social rental housing showed a significant decline across the globe including in Indian cities. For instance, only 5% of new residential construction in Mumbai between 1961 and 2000 was rental housing that too with private ownership (Tandel et al., 2016). A near absence of any formal government housing in rental market thus encouraged proliferation of scrupulous, unplanned and sub-standard

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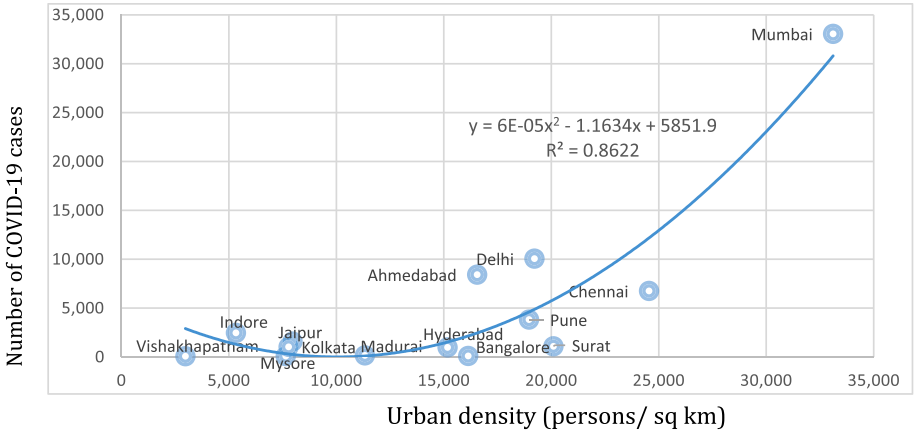

Fig. 1. The urban density and COVID-19 incidence in India's top 14 cities with over 75 cases demonstrates a strong correlation.

housing in cities. In 2015, the government formulated the Draft National Urban Rental Housing Policy (MoHUA, 2015), yet there was little prioritization to it on-ground in comparison to the flagship 'Smart City Mission' and other national urban policies (Sharma, 2019).

As COVID recovery, the government of India on July 8, declared a scheme for affordable rental housing complexes for urban migrants/ poor (PIB, 2020), making a compelling case for complete structural redevelopment and gentrification of urban ghettoes, slums and informal settlements that house about 64 million people (CBC, 2011). What should be the government's approach in implementing this new policy? There are five key strategies. First, based on city level migrant statistics and existing landuse allocations, the government should identify all major land banks to be unlocked and monetized. These should be within city limits to maximize prevailing infrastructure, social-mix and reduce labour's traveling costs to workplaces. Second, the government should form a housing/ real estate trust involving public institutions and major private investors on equal stakes. The state governments can become a party either by funding or contributing land. This trust would pool funds, float infrastructure bonds and implement housing projects with municipalities.

Third, updated design & technical guidelines ought to encourage high-density, multi-storey and durable housing while avoiding crowding, chances of respiratory transmission and maintaining decent quality of life. This is plausible by: (a) Increasing the minimum dwelling unit size from 25 sqm to 35sqm to reduce crowding, and (b) a Corona-bonus floor area ratio (FAR) of 1.5–2.0 in addition to the prevailing FAR of 1.2–1.5 typical in Indian cities. The surplus floor space can be used for bigger homes, wider passages leaving more ground space for social facilities, work spaces, local shopping and parks/ playgrounds within the housing complexes to promote healthy, safer lifestyle and livelihoods supporting functions.

Fourth, bridge demand-supply and lease management issues by launching a digital platform that can list & locate all vacant houses, register applications, automatically grant lease, manage contracts and payments. To begin with, the database can include private houses lying vacant in the city, through voluntary registration by their owners. As per government's own report on urban housing shortage for the 12th plan period (2012–17) (MoHUPA, 2012), over 11 million houses are lying unused in cities (Sharma, 2019). Fifth, the central government can promote rental housing in states, by levying an additional tax on assumed rent accrued by owners on their second house by amending income tax rules. This is a prevalent norm in many welfare states keen to regulate the housing market in favour of the needy.

How do these findings link with social-housing experiences from other countries? Post-war reconstruction in Europe, Japan, Singapore & South Korea has seen social-rented housing stock materialize largely through public sector investments and asset creation (Aveline-Dubach, 2020; O'Sullivan & De Decker, 2007; Park, 1998). Land development and construction requires fostering coalitions with other actors be it state agencies as Central Provident Fund in case of Singapore or large capitalists in case of Seoul (Park, 1998). Evidence from other Asian cities in China (Dong, 2017), Jakarta, Chongqing, and Kolkata (Shatkin, 2016), and Tokyo (Aveline-Dubach, 2020) show that with increasing land prices, only those cities that curb speculative tendencies and capitalize on multiple funding mechanisms through land monetization, real estate investment trusts, infrastructure bonds are able to create more social and spatial equity in the housing markets.

What are the research implications on urban policy and planning and how are these theories, policies and methods relevant to COVID-19 literature from international perspective? We would like to note that the pandemic response brought a global spurt of ideas and opinions, mostly as grey literature on the internet. These basically fathom either of the two diagonally opposite viewpoints: (1) how the pandemic is affecting immediate urban lifestyles of the people, (2) the utopian worldview of a post-pandemic city that is fundamentally divergent from what urban knowledge we already possess. Both the strands lack sufficient realistic assimilation of the pandemic situation to reason substantive implications for the future. In this commentary, our research contribution has been towards making a methodical assessment of how COVID-19 experience emboldens a relook at existing living conditions in the developing countries, with public-private rental housing as the key instrument.

In doing so, we acknowledge the prevailing challenges and issues that sustain slums and informal settlements in the Global South. These include non-clarity of land titles and legal disputes, land-mafia and political patronage, high land values, construction costs and conservative building bye-laws discouraging economic viability for redevelopment (Ooi & Phua, 2007). The lack of sufficient financial resources, administrative capacities and political will of municipalities further aggravates the situation. The conventional urban policies and literature on housing for low-income groups in developing countries typically focus only on tenure status as the key variable in housing improvement, sidelining the opportunity of improving living conditions by infrastructure improvement (Mukhija, 2001). By demonstrating the case of how this could be implemented in one of the most crowded context of Dharavi, we are suggesting three key imperatives: (a) COVID-19 pandemic can break the status-quo of high-risk and unhealthy built environments, by improving living conditions of the vulnerable populations and making their surroundings resilient to public health disasters and natural climate change too, (b) Equity and inclusiveness in landuse planning, decent quality and affordable living, access to facilities, making less work-related travel for the urban poor, (c) The pandemic helps to develop long-term urban resilience wherein economic recovery translates into concrete and sustainable reconstruction on the

ground. In nutshell, planned social housing offers a win-win situation in creating sustainable public assets, healthy and durable living spaces, construction jobs so that the urban poor and migrant labour sees a secure, safe and resilient future in event of next such crisis.

Declaration of competing interest

The views presented by the author are independent without any influence or conflict of interest.

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